

What is claimed is:

1. A method for identifying candidate compounds for regulating skeletal muscle mass or function, comprising:
  - a. contacting a test compound with a vertebrate CRF<sub>2</sub>R;
  - b. determining whether the test compound binds to or activates the CRF<sub>2</sub> R;
  - c. selecting those compounds that bind or activate CRF<sub>2</sub>R, and further determining whether the test compound increases muscle mass or function in a skeletal muscle atrophy model system; and
  - d. identifying those test compounds that modulate muscle mass or function as candidate compounds for regulating skeletal muscle mass or function.
2. The method for identifying candidate compounds according to Claim 1, in which the CRF<sub>2</sub>R is expressed on a eukaryotic cell.
3. The method for identifying candidate compounds according to Claim 1 wherein the CRF<sub>2</sub>R has the amino acid sequence corresponding to the amino acid sequence of SEQ ID NO: 10, SEQ ID NO: 12, SEQ ID NO: 14, SEQ ID NO: 18, SEQ ID NO: 20, SEQ ID NO: 24, SEQ ID NO: 26, SEQ ID NO: 32 or SEQ ID NO: 38.
4. The method for identifying candidate compounds according to Claim 2, in which determining whether the test compound activates the CRF<sub>2</sub>R involves measuring the cellular cAMP level.
5. The method for identifying candidate compounds according to Claim 4, in which the cell further comprises a reporter gene operatively associated with a cAMP responsive element and measuring the cellular cAMP level involves measuring expression of the reporter gene.
6. The method for identifying candidate compounds according to Claim 5, in which the reporter gene is alkaline phosphatase, chloramphenicol acetyltransferase, luciferase, glucuronide synthetase, growth hormone, placental alkaline phosphatase, or Green Fluorescent Protein.

7. A method for identifying candidate compounds for regulating skeletal muscle mass or function comprising:
  - a. contacting a test compound with a cell expressing a functional vertebrate  $\text{CRF}_2\text{R}$ , and determining level of activation of  $\text{CRF}_2\text{R}$  resulting from the test compound;
  - b. contacting said test compound with a cell expressing a functional vertebrate  $\text{CRF}_1\text{R}$ , and determining level of activation of  $\text{CRF}_1\text{R}$  resulting from the test compound;
  - c. comparing the level of  $\text{CRF}_2\text{R}$  activation and the level of  $\text{CRF}_1\text{R}$  activation;
  - d. selecting those test compounds that selectively activate  $\text{CRF}_2\text{R}$  and further determining whether said test compound increases muscle mass or function in a skeletal muscle atrophy model system; and
  - e. identifying those test compounds that modulate muscle mass or function as candidate compounds for regulating skeletal muscle mass or function.
8. The method according to claim 7 wherein the candidate compound exhibits a 100-fold or greater selectivity for  $\text{CRF}_2\text{R}$ .
9. The method according to claim 7 wherein the candidate compound exhibits a 1000-fold or greater selectivity for  $\text{CRF}_2\text{R}$ .
10. The method according to claim 7 wherein the candidate compound exhibits between 1-fold and 100-fold selectivity for  $\text{CRF}_2\text{R}$ .
11. A method for identifying candidate therapeutic compounds from a group of one or more candidate compounds which have been previously determined to bind to or activate a vertebrate  $\text{CRF}_2\text{R}$  comprising:
  - a. administering the candidate compound to a non-human animal; and
  - b. determining whether the candidate compound regulates skeletal muscle mass or function in the treated animal.
12. A method for increasing skeletal muscle mass or function in a subject in which such an increase is desirable, comprising:

- a. identifying a subject in which an increase in muscle mass or function is desirable; and
  - b. administering to the subject a safe and effective amount of a CRF<sub>2</sub>R agonist.
- 13. The method of claim 12 wherein the subject in need of increase in muscle mass or function is characterized by having skeletal muscle atrophy, comprising:
  - a. identifying a subject in need of treatment for skeletal muscle atrophy; and
  - b. administering to the subject a safe and effective amount of a compound that is CRF<sub>2</sub>R agonist.
- 14. The method for treating skeletal muscle atrophy according to Claim 13, wherein the CRF<sub>2</sub>R agonist is a chimeric or human antibody.
- 15. A purified antibody specific for a CRF<sub>2</sub>R, wherein the antibody is a chimeric or human antibody.
- 16. A pharmaceutical composition, comprising:
  - a. a safe and effective amount of a CRF<sub>2</sub>R agonist; and
  - b. a pharmaceutically-acceptable carrier.
- 17. The pharmaceutical composition according to Claim 16 wherein the CRF<sub>2</sub>R agonist is a chimeric or human antibody specific for a CRF<sub>2</sub>R.
- 18. The pharmaceutical composition according to Claim 16 wherein the CRF<sub>2</sub>R agonist is urocortin II.